Application Serial No. 10/516,430
Restriction mailed September 24, 2007
Restriction mailed September 24, 2007

Reply to Restriction mailed November 21, 2007

Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application.

Listing of Claims:

1. (Original) A method of identifying a fetal cell in a maternal blood sample, the method

comprising detecting a maternal antibody bound to a fetal cell.

2. (Original) The method of claim 1, wherein the method further comprises exposing the

maternal antibody bound to a fetal cell to an agent capable of forming a complex with the

maternal antibody.

3. (Original) The method of claim 2, wherein the agent is detectably labelled.

4. (Original) The method of claim 3, wherein the label is used to detect the fetal cell-maternal

antibody complex.

5. (Original) A method of identifying a fetal cell in a sample, the method comprising exposing

cells in the sample to maternal antibodies, and detecting a maternal antibody bound to a fetal cell,

wherein the maternal antibodies comprise maternally produced antibodies specific for paternally-

inherited fetal antigens.

6. (Original) The method according to claim 5, wherein the maternal antibodies are prepared

by a process comprising dissociation of antibodies from a complex with a soluble HLA antigen

and/or an anti-idiotypic antibody.

7. (Previously presented) The method of claim 5, wherein the method further comprises

exposing the maternal antibody bound to a fetal cell to an agent capable of forming a complex

with the maternal antibody.

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8. (Previously presented) The method according to claim 7, wherein the agent is an antibody

or antibody fragment.

9. (Previously presented) The method according to claim 7, wherein the agent is a

polypeptide that binds to an immunoglobulin.

10. (Original) The method of claim 9, wherein the polypeptide is selected from the group

consisting of: protein A, protein G and protein L.

11. (Previously presented) The method according to claim 7, wherein the agent is detectably

labelled.

12. (Original) The method of claim 11, wherein the label on the agent is used to detect the

fetal cell-maternal antibody complex.

13. (Previously presented) The method according to claim 12, wherein the label is selected

from the group consisting of: a fluorescent label, a radioactive label, a paramagnetic particle, a

chemoluminescent label, an enzymatic label, and a label that is detectable by binding to a

molecule.

14. (Original) The method of claim 13, wherein the label is a paramagnetic particle and

wherein the step of detecting the fetal cell-maternal antibody complex comprises exposing the

cells bound by agent-maternal antibody complexes to a magnet.

15. (Currently amended) The method according to claim 13, wherein the label is a fluorescent

label and wherein the step of detecting the fetal cell-maternal antibody complex comprises

performing fluorescence activated cell sorting.

16. (Previously presented) A method of enriching fetal cells from a maternal blood sample, the

method comprising:

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i) isolating a fraction comprising peripheral blood mononuclear cells from the sample;

ii) contacting the fraction with an antibody from a maternal blood sample under conditions

allowing maternally produced antibodies specific for paternally-inherited fetal antigens to

bind fetal cells in the fraction;

iii) contacting the fetal cells bound to maternal antibodies with an agent capable of forming a

complex with maternal antibodies; and

iv) recovering fetal cells bound to agent-maternal antibody complexes.

17. (Original) The method of claim 16, wherein i) further comprises removing antibodies

bound to cell surface antigens from the cells or removing antigen-antibody complexes from the

cells.

18. (Previously presented) The method according to claim 16, wherein cells in the fraction

comprising peripheral blood mononuclear cells are at least partially purified before being

contacted with the antibody.

19. (Previously presented) The method of claim 18, wherein the fraction is depleted of a least

one type of maternal cell.

20. (Previously presented) The method according to claims 16, wherein the fetal antigen-

reactive antibodies obtained from the maternal blood sample are prepared by dissociation from a

complex with a soluble HLA antigen and/or an anti-idiotypic antibody.

21. (Previously presented) The method according to claim 16, wherein ii) and iii) of claim 16

are performed under conditions in which the complement lysis pathway does not function.

22. (Previously presented) The method according to claim 16, wherein the peripheral blood

mononuclear cells are cultured in vitro before the fraction is contacted with maternally produced

antibodies.

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23. (Previously presented) The method according to claim 16, wherein the agent is bound to a

detectable label or isolatable label.

24. (Previously presented) The method of claim 23, wherein the detectable label or isolatable

label is selected from the group consisting of: a fluorescent label, a radioactive label, a

paramagnetic particle, a chemoluminescent label, an enzymatic label, and a label that is detectable

by virtue of binding to a molecule.

25. (Previously presented) The method of claim 23, wherein the step of recovering cells bound

to agent-maternal antibody complexes comprises detecting the label and separating a fraction

comprising the label.

26. (Original) The method according to claim 25, wherein the detectable label or isolatable

label is a fluorescent label and wherein the step of recovering cells bound by agent-maternal

antibody complexes comprises performing fluorescence activated cell sorting.

27. (Original) The method of claim 25, wherein the detectable label or isolatable label is a

paramagnetic particle and wherein the step of recovering cells bound by agent-maternal antibody

complexes comprises exposing the cells bound by agent-maternal antibody complexes to a

magnet.

28. (Previously presented) The method according to claim 16, wherein the agent is an antibody

or fragment of an antibody.

29. (Previously presented) The method according to claim 16, wherein the agent is a

polypeptide that binds to an immunoglobulin.

30. (Original) The method of claim 29, wherein the polypeptide binds to any class of human

antibody.

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31. (canceled)

32. (Original) A method of enriching fetal cells from a sample of cells obtained from maternal

blood, the method comprising exposing cells in the sample to maternal antibodies and recovering

fetal cell-maternal antibody complexes, wherein the maternal antibodies comprise maternally

produced antibody specific for paternally-inherited fetal antigens.

33. (Original) The method according to claim 32, wherein the maternal antibodies are prepared

by a process comprising dissociation of antibodies from a complex with a soluble HLA antigen

and/or an anti-idiotypic antibody.

34. (Previously presented) The method according to claim 33 wherein the step of recovering

the fetal cell-maternal antibody complexes from the sample is performed by contacting the

complex with an agent capable of binding to a maternal antibody in said complex and recovering

cells bound by agent-maternal antibody complexes.

Claims 35-46 (canceled)

47. (Previously presented) Isolated fetal cells obtained by a process comprising the method of

claim 34.

Claims 48-57. (canceled)

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